



## **FOOTPRINT ROADS PILOT PROGRAM**

### **PROGRAM GUIDELINES AND CANDIDATE PROJECT APPLICATION FORM**

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#### **PROGRAM INTENT, PARAMETERS AND GUIDELINES**

Design criteria for projects on existing roadways must often be viewed from a different perspective than design criteria for new roadway construction projects. Many projects on existing roadways are initiated for reasons other than geometric design deficiencies (e.g. pavement deterioration), and, many of these projects are also located within limited rights of way, on main streets in city or town centers, or adjacent to natural resources, public lands or historic resources. Often, projects on existing roadways are initiated in communities where land use and cultural characteristics are already well established. For projects like this, project proponents should consider applying the Footprint Roads Pilot Program guidelines to accomplish identified project goals.

The Footprint Roads Pilot Program guidelines allow project proponents to preserve and enhance historic and community character, extend the service life of the existing facility, enhance safety for all users, reduce maintenance costs, and protect the environment. Work under this program should consist primarily of roadway improvements that follow the existing horizontal and vertical alignments of the project roadways, generally within the existing "footprints" of the project roadways. Additional work may also include elements such as drainage improvements, signing, pavement markings, roadside improvements, guardrail installation or improvements, pedestrian and bicycle improvements, edging installation or adjustment, ADA/AAB elements, and other incidental improvements.

The Footprint Roads Pilot Program is not intended as a replacement or expansion of the Local Aid (Chapter 90) program or as a replacement program for state highway resurfacing and maintenance projects. It is intended to improve and protect roads that contain one or more of the following assets:

- a) Serve as a main street in city or town centers
  - Located in a mixed use community, village, neighborhood, downtown or government service center
- b) Contain historic assets
  - Listed on State or National Register

- Eligible for inclusion in the National Register by the Massachusetts Historic Commission
- Identified by the local historic commission as an area containing historic resources
- c) Pass through or adjacent to public lands
  - Conservation lands
  - Recreational lands
  - Other public lands
- d) Pass through or adjacent to natural resources
  - Wetlands
  - Coastal resources
  - Bodies of water
  - Trees of 14" dbh (diameter at breast height) or larger
- e) Are designated as a scenic road or byway
  - State or federally designated scenic byway or highway
  - Proposed scenic byway that has a completed corridor management plan or a corridor management plan underway
  - Locally designated scenic road
- f) Pass through or adjacent to agricultural lands
  - Prime
  - Unique
  - Other than prime or unique that is of statewide importance
  - Other than prime or unique that is of local importance

Qualified projects under this program are exempt from all of the 13 AASHTO controlling criteria.

### **PROGRAM ELIGIBILITY CRITERIA**

To be eligible under this program, projects must meet all of the following criteria:

1. All project roadways must be part of the Federal Aid System.
2. All project roadways must be Non-National Highway System roadways.
3. All project roadways must have a pavement structure that, through resurfacing, restoration or rehabilitation techniques, can be expected to provide an acceptable level of structural adequacy for a minimum design life of 10 years.
4. All project intersections must have average or lower-than-average crash rates when compared to averages for similar locations (signalized or unsignalized) in similar areas of the state (MHD District regions). Current crash rate averages are available from the Safety Management/Traffic Operations Unit of MHD.

5. All project roadways must not contain high-hazard locations that have been documented to have adversely affected the safety of any user. Any roadways that have experienced at least one fatality attributable to existing substandard design elements shall not be eligible under this program.

### ELIGIBLE SCOPE OF WORK

The project scope must include pavement overlay, restoration or rehabilitation. Full-depth or partial-depth roadway reconstruction may also be included in some situations. Roadways should be reconstructed within their existing footprints, generally matching their existing horizontal and vertical alignments, and their existing widths. Pavement widths may be expanded or narrowed in limited areas to allow for a uniform pavement width within the project limits.

The project scope may also include any of the following:

- Drainage improvements,
- Signing,
- Pavement markings,
- Roadside improvements,
- Guardrail installation or improvements,
- Pedestrian improvements (such as sidewalks, crosswalks and public transportation waiting areas),
- Bicycle improvements (such as signs, improved pavement markings and improved shoulders as defined under these guidelines),
- ADA/AAB elements (such as wheelchair ramps),
- Edging installation or adjustment,
- Traffic signal system upgrades (if improvements are incidental to the project),
- Landscaping, street lighting, or other enhancements.

### DESIGN CRITERIA

Qualified projects under this program are exempt from all of the 13 AASHTO controlling criteria and from the curb lane width requirements of Engineering Directive E-98-003 (*In Response to MGL Ch 87 Acts of 1996, Bicycle and Pedestrian Accommodation*).

All other relevant MassHighway standards, policies and procedures will apply. Projects must comply with the *Americans with Disabilities Act*, the requirements of the Massachusetts Architectural Access Board, and MassHighway handicapped accessibility standards and policies. Projects must also comply with the *Manual on Uniform Traffic Control Devices* and with Federal Highway Administration and MassHighway requirements for conformance with *National Cooperative Highway Research Program Report 350* and its subsequent revisions (for guardrails, work zone traffic control devices,

sign supports, etc.) No project is exempt from local, state and federal environmental requirements.

### **PROJECT DOCUMENTATION REQUIREMENTS**

Each project under this program must be properly documented in the format outlined in the “Candidate Project Application Form” section of this document.

If the District Highway Director and the Regional Planning Agency both recommend the project for inclusion in this program, they will forward the application materials to the Footprint Roads Pilot Program Selection Committee for prioritization in the selection process. In order to receive construction funding, an approved project must be included in the appropriate Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP). Any projects not approved for inclusion under this program may still be advanced under the normal procedures outlined in the *Highway Design Manual*. Project proponents/designers must maintain the project application/documentation and any subsequent approval letters in the permanent project file.



## FOOTPRINT ROADS PILOT PROGRAM CANDIDATE PROJECT APPLICATION FORM

This form should be completed providing as much detailed information as possible to evaluate the merits of your project. Where necessary, attachments should be labeled and provided for review.

Completed forms should be submitted to the appropriate MassHighway District Office and Regional Planning Agency for concurrent review.

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### I. Project Identification

City/Town: \_\_\_\_\_

Street: \_\_\_\_\_

Physical Limits (stations and coordinates or distances from town lines and/or intersecting streets): \_\_\_\_\_

Total Length of Project: \_\_\_\_\_

Project Locus: (Provide attachment)

### II. Project Purpose and Scope of Work

Discuss the purpose of the proposed project and the specific proposed elements of work, including the type of improvements and all incidental elements of work. Also, discuss the existing targeted deficiencies with the project roadways and how the proposed scope of work will correct those targeted deficiencies. Any special roadway and/or community characteristics may be included here to enhance the project description and to support the project purpose.

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**III. Project Proponent Information****Applicant:** \_\_\_\_\_**Primary Contact Person:** \_\_\_\_\_**Title:** \_\_\_\_\_**Telephone Number:** \_\_\_\_\_**Designer/Consultant (if known):** \_\_\_\_\_**IV. Roadway Description****Functional Classification:** \_\_\_\_\_**Number and Types of Lanes:** \_\_\_\_\_**Existing Lane, Shoulder and Sidewalk Widths:** \_\_\_\_\_**Existing Geometry (in general terms):** \_\_\_\_\_**Existing Pavement Condition:** \_\_\_\_\_**Existing Land Use (in general terms):** \_\_\_\_\_**Existing Right of Way:** \_\_\_\_\_**Description of Cultural and/or Natural Resources (applicable assets as identified in “Program Intent, Parameters and Guidelines” section of this document):** \_\_\_\_\_\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_**V. Traffic Data****Current Average Annual Daily Traffic Volume (AADT):** \_\_\_\_\_**Future AADT for 10-year design life:** \_\_\_\_\_**Current Peak Hour Traffic Volume:** \_\_\_\_\_**Current Directional Distribution (D):** \_\_\_\_\_**Current Percentage of Truck Traffic (T):** \_\_\_\_\_**Turning Movements at Major Intersections:** (Provide attachments)

**VI. Vehicular Level of Service Analysis**

**Complete Level of Service Analyses in accordance with the guidelines set forth in the *Highway Capacity Manual*. Separate analyses must be completed for the mainline and for each major intersection within the project limits. All analyses should be completed using current-year traffic data and existing conditions. Include any necessary attachments.**

**Also, document any substandard Levels of Service. This should include a discussion of any locations that have existing Levels of Service of “E” or “F”. Document reasons why improvements to Level of Service are not warranted or practical, and describe any proposed elements of work that will relieve the existing congested conditions. In general, a proposed project should not diminish the existing Level of Service for any project roadways.**

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**VII. Bicycle and Pedestrian Accommodation Analysis**

**Address bicycle and pedestrian accommodation within the project limits relative to the intent of Chapter 87 of the Acts of 1996. This analysis should include a description of existing bicycle and pedestrian features/conditions and reasonable efforts to improve accommodation for bicyclists and pedestrians. A proposed project should not diminish existing accommodation for bicyclists or pedestrians.**

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**VIII. Crash Data and Crash Analysis**

Complete crash (accident) analyses for the mainline and for each major intersection within the project limits. All analyses should be completed using crash data from the most recent 3-year period. Attach any necessary pages. The following information should be collected and documented:

Number and percentage of crashes by type:

Run-off-road: \_\_\_\_\_  
Head-on: \_\_\_\_\_  
Sideswipe: \_\_\_\_\_  
Rear end (intersection only): \_\_\_\_\_  
Angle (intersection only): \_\_\_\_\_  
Left-Turn (intersection only): \_\_\_\_\_  
Fixed Object: \_\_\_\_\_  
Overturn: \_\_\_\_\_  
Pedestrian: \_\_\_\_\_  
Other: \_\_\_\_\_  
Unknown: \_\_\_\_\_

**Collision Diagrams for intersections** (Provide attachments)

**Intersection crash rates for each major intersection** (Use Crash Rate Worksheets, attached)

**Statewide crash rates for similar facilities:** (Available from MassHighway Safety Management/Traffic Operations Unit) \_\_\_\_\_

**Identify specific high-hazard locations (crash analysis by location):** \_\_\_\_\_

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**IX. Estimated Cost**

Provide a reasonable estimate of all construction costs. Factor in any necessary adjustments to present-day costs to account for the anticipated time periods of the programming and design phases.

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